

September 20, 2007

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: NRC INSPECTION REPORT 050-00295/07-02(DNMS) -
ZION NUCLEAR STATION

Dear Mr. Crane:

On September 7, 2007, the NRC completed an inspection at the Zion Nuclear Station. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements. Specifically, the inspector evaluated organization and management controls, safety reviews, maintenance and surveillance, and radiological waste. At the conclusion of the inspection on September 7, 2007, the NRC inspector discussed the findings with members of your staff.

The inspection consisted of an examination of activities at the facility as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, field observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC did not identify any violations.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

C. Crane

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We will gladly discuss any questions you may have regarding this inspection.

Sincerely,

/RA/

Patrick L. Loudon, Chief
Decommissioning Branch

Docket No. 05000295

License No. DPR-39

Enclosure:

Inspection Report 050-00295/07-02(DNMS)

cc w/encl: Zion Nuclear Power Station Decommissioning Plant Manager
Regulatory Assurance Engineer - Zion
Senior Vice President - Nuclear Services
Vice President of Operations - Mid-West Pressurized Water Reactor
Vice President - Licensing and Regulatory Affairs
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.:	050-00295
License No.:	DPR-39
Report No.:	050-00295/07-02(DNMS)
Licensee:	Exelon Generation Company, LLC
Facility:	Zion Nuclear Station
Location:	101 Shiloh Boulevard Zion, IL 60099
Date:	September 5 through 7, 2007
NRC Inspector:	Peter J. Lee, Ph.D., CHP, Health Physicist
Approved by:	Patrick L. Loudon, Chief Decommissioning Branch Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Zion Nuclear Station NRC Inspection Report 050-00295/07-02(DNMS)

This routine decommissioning inspection focused on the evaluation of the licensee's facility management and control, decommissioning support activities, spent fuel safety, and radiological safety.

Facility Management and Control

- The inspector determined that the licensee's staffing was adequate for the level of work being performed at the site and met the requirements established in licensee procedures. The licensee properly implemented training programs for general employee training and fuel handling. (Section 1.1)
- The inspector determined that the licensee's process for evaluating the safety impacts of facility changes was in compliance with the requirements of 10 CFR Part 50.59. (Section 1.2)

Decommissioning Support Activities

- The inspector determined that the licensee implemented its maintenance and surveillance programs in accordance with its procedures and NRC regulations. (Section 2.1)

Radiological Safety

- The inspector determined that the licensee conducted the transfer of spent resin from the storage tank to the shipping cast in accordance with its procedures and As-Low-As-is-Reasonably-Achievable (ALARA) plan. (Section 3.1)

Report Details

Summary of Plant Activities

During the period covered by this inspection, the licensee maintained the spent fuel in storage within the spent fuel pool and transferred the spent resin to the shipping cast.

1.0 Facility Management and Control

1.1 Organization, Management and Cost Controls (IP 36801)

a. Inspection Scope

The inspector evaluated the licensee's staffing and two training programs: "Nuclear General Employee Training - (NGET);" and "Certified Fuel Handler Initial Training and Retraining Program." The inspector reviewed the site training matrix, and the licensee's tracking and implementation of certified fuel handler and NGET training.

b. Observations and Findings

The licensee made changes to its staffing at the station since the last inspection. The changes included the filling of two positions: Maintenance Mechanist and Health Physics Technician. Each of the positions were described in licensee procedure ZAP 200-01, "Zion Decommissioning Organization," Revision 9.

The licensee tracked required training for station personnel using the site training matrix. Licensee personnel received annual operating examinations, and biennial written examinations in accordance with Training Procedure Description (TPD)-312, "Certified Fuel Handler Initial Training and Retraining Program Description," Revision 0, dated May 22, 1998; and annual NGET training documented on TQ-AA-210-4105, "Course Attendance Sheet, Revision 1." All personnel taking the examinations reviewed during this inspection period scored passing grades on the exams.

c. Conclusions

The inspector determined that the licensee's staffing was adequate for the level of work being performed at the site and met the requirements established in licensee procedures. The licensee properly implemented training programs for general employee training and fuel handling.

1.2 Safety Reviews, Design Changes, and Modifications (IP 37801)

a. Inspection Scope

The inspector reviewed the licensee's safety screening reviews to verify that completed reviews were consistent with the requirements of 10 CFR Part 50.59. The review included selected screening reviews completed since January 2007.

b. Observations and Findings

The licensee's Administrative Procedure ZAP-100-06 was consistent with the NRC's guidance on 10 CFR 50.59 screening reviews. The licensee conducted several safety screening reviews of facility changes and none of the changes required a formal 10 CFR Part 50.59 safety evaluation.

c. Conclusions

The inspectors determined that the licensee's process for evaluating the safety impacts of facility changes was in compliance with the requirements of 10 CFR 50.59.

2.0 Decommissioning Support Activities

2.1 Maintenance and Surveillance (IP 62801)

a. Inspection Scope

The inspector reviewed the licensee's annual assessment of its 10 CFR Part 50.65, "Maintenance Rule" (MR) program for the 2006 calendar year. The inspectors also reviewed the work orders associated with MR summary of performance for the first and second quarter of 2007, to verify that maintenance and surveillance for structures, systems, and components (SSCs) important to spent Fuel Storage Safety, were conducted in a manner that provided adequate protection of spent fuel.

b. Observations and Findings

During annual assessment, the licensee reviewed the following aspects of its MR program: changes in scope, review of goals, review of performance, corrective action effectiveness, balance of availability and reliability, and expert panel recommendations. The licensee's staff reviewed 19 MR functions, 9 high importance functions and 10 low importance functions, that were documented in Attachment A of ZAP 500-13C. During the assessment period of 2006, the licensee identified two functional failures. All failures were associated with low importance functions and corrective actions had been satisfactory to prevent recurrence and were performed in a timely manner. All the work request reviews were conducted in accordance with the MR performance program and documented in Attachment 1 of ZAP 500-13A. There were no functional failures identified during the first and second quarter of 2007.

c. Conclusions

The inspector determined that the licensee implemented its maintenance and surveillance programs in accordance with its procedures and NRC regulations.

3.0 Radiological Safety

3.1 Transportation of Radioactive Materials (IP 86750)

a. Inspection Scope

The inspector reviewed the licensee's procedure for removal and transfer of spent resin from the spent resin storage tank (SRST) to the shipping cast. The inspector reviewed the ALARA plan and radiation work permits of the transfer of spent resin to verify that the licensee had established procedures, and engineering and work controls that were based on sound radiation protection principles in order to achieve occupational exposures that were ALARA. The inspector also toured the area where the spent resin transfer took place.

b. Observations and Findings

There were about 300 cubic feet of spent resin in the SRST ready for the disposal. During the inspection, the licensee completed the transfer of about 100 cubic feet of spent resin. The areas where the spent resin took place were posted and access was controlled in accordance with the ALARA plan. Based on the review of external exposure records, workers received doses less than the dose limits specified in radiation work permits and 10 CFR Part 20.

c. Conclusions

The inspectors determined that the licensee conducted the transfer of spent resin from the storage tank to the shipping cast in accordance with its procedures and ALARA plan.

4.0 Exit Meeting

The inspectors presented the inspection results to licensee management at the conclusion of the inspection on September 7, 2007. The licensee acknowledged the findings presented did not identify any of the documents or processes reviewed by the inspectors as proprietary.

Attachment: Supplemental Information

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

- * R. Schuster, Plant Manager
 - * J. Ashley, Design Engineering
 - * R Adams, Operations and Engineering Manager
 - * L. Cunningham, Security Project Manager
 - * M. Petersen, Administration/Training Supervisor
- * Present at the September 7, 2007, exit meeting.

INSPECTION PROCEDURES (IP) USED

IP 36801	Management, Organization, and Cost Control
IP 37801	Safety Reviews, Design Changes, and Modifications
IP 62801	Maintenance and Surveillance
IP 86750	Transportation of Radioactive Materials

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	None
Closed	None
Discussed	None

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DNMS	Division of Nuclear Materials Safety
NGET	Nuclear General Employee Training
NRC	Nuclear Regulatory Commission
ALARA	As Low As is Reasonably Achievable

LICENSEE DOCUMENTS REVIEWED

Licensee documents reviewed and utilized during the course of this inspection are specifically identified in the "Report Details" above.